

pancreatic islet cell, a skeletal muscle, a smooth muscle, a hepatocyte and a retinal ganglial cell.

8. (Withdrawn) The cell population of Claim 1, further including expression of P21 or P53 after between about 20 to about 50 population doublings of the cells, wherein expression of P53 is a relative expression of up to about 3000 transcripts of P53 per 10^6 transcripts of an 18s rRNA and expression of P21 is a relative expression of up to about 20,000 transcripts of P21 per 10^6 transcripts of an 18s rRNA.
9. (Withdrawn) The cell population of Claim 1, wherein the cells are derived from a source selected from the group consisting of a bone marrow, a skin, a fat, an umbilical cord blood, a muscle and a placental source.
10. (Withdrawn) The cell population of Claim 1, wherein the cells are derived from bone marrow.
11. (Withdrawn) The cell population of Claim 1, wherein the bone marrow cells are human bone marrow cells.
12. (Withdrawn) The cell population of Claim 1, wherein the cell population does not express CD34 and/or CD45.
13. (Withdrawn) The cell population of Claim 1, wherein the cells express at least one trophic factor selected from the group consisting of BDNF, IL-6, NGF and MCP-1.
14. (Currently Amended) A substantially homogenous isolated cell population derived from bone marrow, wherein greater than about 91% of the cells of the cell population with co-express co-express CD49c and CD90, but does not express bone sialoprotein and wherein the cell population has a doubling rate of less than about 30 hours.

15-18. Canceled

2 19. (Currently Amended) The isolated cell population of Claim 14, wherein the cells have the potential to differentiate into a preselected phenotype.

3 20. (Currently Amended) The isolated cell population of Claim 19, wherein the preselected phenotype is at least one member selected from the group consisting of a chondrocyte, an astrocyte, an oligodendrocyte, a neuron, an osteocyte, an osteoblast, an osteoclast, a cardiomyocyte, a pancreatic islet cell, a skeletal muscle, a smooth muscle, a hepatocyte and a retinal ganglial cell.

4 21. (Currently Amended) The isolated cell population of Claim 14, further including expression of P21 p21 or P53 p53 after between about 20 to about 50 population doublings of the cells, wherein expression of P53 p53 is a relative expression of up to about 3000 transcripts of P53 p53 per 10^6 transcripts of an 18s rRNA and expression of P21 is a relative expression of up to about 20,000 transcripts of P21 p21 per 10^6 transcripts of an 18s rRNA.

22. Canceled

5 23. (Currently Amended) The isolated cell population of Claim 14, wherein the cells are derived from human bone marrow.

24. Canceled

6 25. (Currently Amended) The isolated cell population of Claim 14, wherein the cell population does not express CD34 and/or CD45.